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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,450	09/30/2003	Nathaniel Marvin Myhre	60001.0384US01/MS303947.1	5594
27488 7590 04/02/2007 MERCHANT & GOULD (MICROSOFT) P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			EXAMINER DAYE, CHELCIE L	
			ART UNIT 2161	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/02/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary**Application No.**

10/675,450

Applicant(s)

MYHRE, NATHANIEL MARVIN

Examiner

Chelcie Daye

Art Unit

2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-15, and 17-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-15 and 17-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

1. This action is issued in response to applicant's amendment filed December 4, 2006.
2. Claims 1-7 and 9-30 are presented. No claims added and claims 8, 16, and 30 are cancelled.
3. Claims 1-7, 9-15, and 17-29 are pending.

Continued Examination Under 37 CFR 1.114

4. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 4, 2006 has been entered.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roche (US Patent No. 6,859,800) filed April 26, 2000, in view of Hullender (US**

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Patent No. 6,111,985) filed June 6, 1997, and further in view of Lopresti (US Patent No. 5,832,474) filed February 26, 1996.

Regarding Claim 1, Roche discloses a computer-implemented method for searching through ink characters within an electronic document comprising:

accepting, by a computer, a search query (column 9, lines 48-50, Roche), where the search query comprises a search query word and a list of electronic documents containing the electronic document (Fig.6; columns 13-14, lines 60-67 and 1-4, Roche);

retrieving a search query character from the search query word in the search query (column 12, lines 33-37 and 60-67, Roche). However, Roche is silent with respect to accepting an ink word from the electronic document; accepting an ink alternate word, wherein the ink alternate word is an estimation of the ink word; retrieving an ink alternate character for the ink alternate word; determining when the ink alternate character matches the search query character; repeating stages (d)-(f) for a plurality of ink alternate characters; and returning a match list of the ink alternate character matches resulting from stage (f). On the other hand, Hullender discloses accepting an ink word (column 4, lines 25-45, Hullender); accepting an ink alternate word, wherein the ink alternate word is an estimation of the ink word (column 4, lines 60-65, Hullender); retrieving an ink alternate character for the ink alternate word (column 5, lines 7-10, Hullender). Roche and Hullender are analogous art because they are from the same field of endeavor of fulfilling an information need based upon a body of

information. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Hullender's teachings into the Roche system. A skilled artisan would have been motivated to combine as suggested by Hullender at columns 3-4, lines 65-67 and 1-5, respectively, wherein, in order to providing a text buffer for displaying and allowing edit control of the text characters that have been input and recognized by the system, thus further allowing, if the character is handwritten, the system to recognize the character in part by its shape from among computer characters. As a result, permitting the system to recognize both text and handwritten data. However, the combination of Roche in view of Hullender, are silent with respect to determining when the ink alternate character matches the search query character. On the other hand, Lopresti discloses determining when the ink alternate character matches the search query character (column 7, lines 7-26, Lopresti). Roche, Hullender, and Lopresti are analogous art because they are from the same field of endeavor of a search and retrieval system. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Lopresti's teachings into the Roche in view of Hullender system. A skilled artisan would have been motivated to combine as suggested by Lopresti at column 2, lines 8-27, wherein in order to permit user-drawn annotations to be readily incorporated into or associated with the stored document and thus allowing the user annotations to be searched as part of a document retrieval query. Therefore, the combination of Roche in view of Hullender, and further in view of Lopresti, disclose repeating stages (d)-(f) for a plurality of ink alternate characters (column 6, lines 12-22, Hullender); and

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returning a match list of the ink alternate character matches resulting from stage (f) (column 7, lines 26-32, Lopresti).

Regarding Claim 2, the combination of Roche in view of Hullender, and further in view of Lopresti, disclose the computer-implemented method further comprising:

accepting another ink alternate character for the ink alternate word in response to a positive determination that the ink alternate character matches the search query character (column 7, lines 40-50, Hullender);

accepting another search query character from the search query word (column 12, lines 35-39, Roche);

determining when the other ink alternate character matches the other search query character (columns 7-8, lines 60-67 and 1-6, respectively, Lopresti);

determining when the other search query character is the last character in the search query word in response to a positive determination that the other ink alternate character matches the other search query character (column 11, lines 34-50, Lopresti); and

sending a match to the match list in response to a positive determination that the other search query character is the last character in the search query word (column 11, lines 50-52, Lopresti).

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Regarding Claim 3, the combination of Roche in view of Hullender, and further in view of Lopresti, disclose the computer-implemented method further comprising:

determining when the search query contains another search query word (column 12, lines 30-33, Roche);

retrieving a search query character of the other search query word in response to a positive determination that the search query contains the other search query word (column 13, lines 44-56, Roche); and

determining when the search query character of the other search query word matches the ink alternate character of the ink alternate word (columns 7-8, lines 60-67 and 1-6, respectively, Lopresti).

Regarding Claim 4, the combination of Roche in view of Hullender, and further in view of Lopresti, disclose the computer-implemented method further comprising:

accepting another ink alternate word in response to a determination that the ink alternate character does not match the search query character (column 1-10 and 23-35, Hullender);

retrieving an ink alternate character for the other ink alternate word (column 5, lines 7-10, Hullender);

determining when the ink alternate character for the other ink alternate word matches the search query character (columns 7-8, lines 60-67 and 1-6, respectively, Lopresti); and

repeating steps a-c for a plurality of ink alternate words (column 6, lines 12-22, Hullender).

Regarding Claim 5, the combination of Roche in view of Hullender, and further in view of Lopresti, disclose a computer-readable medium having computer-executable instructions for performing the steps recited in Claim 1 (column 3, lines 35-45, Hullender).

7. Claims 6-7,9,12-15, and 17-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roche (US Patent No. 6,859,800) filed April 26, 2000 in view of Lopresti (US Patent No. 5,832,474) filed February 26, 1996.

Regarding Claims 6,12, and 25, Roche discloses a computer-implemented method for searching within an electronic document comprising:

accepting, by a computer, a search query (column 9, lines 48-50, Roche) comprising a search query word to be sought in the electronic document (Fig.6; column 13, lines 44-45, Roche);

determining when the search query word matches at least one set of characters in the electronic document (column 13, lines 54-56, Roche) comprising:

accepting the search query word from the search query (column 12, lines 28-33, Roche);

retrieving one of a plurality of search query characters from the search query word (column 12, lines 33-37 and 60-67, Roche),

accepting a document content character from the electronic document (columns 13-14, lines 60-67 and 1-4, respectively, Roche),

determining when the document content character is an ink character or a text character (columns 16-17, lines 55-67 and 1-11, respectively, Roche)¹,

conducting a text character match in response to a determination that the document content character is a text character (column 10, lines 57-66, Roche), and

conducting an ink character match in response to a determination that the first document content character is an ink character;

adding a match to a match list in response to a positive determination that the search query word matches the set of characters in the electronic document (column 23, lines 24-31, Roche);

processing a boolean operator in the search query (column 35, lines 59-64, Roche);

determining when the match to the first query word before the boolean operator and the match to the first query word after the boolean operator satisfy a spatial relationship (column 2, lines 24-30, Roche)², the spatial relationship being satisfied when the match to the first query word before the boolean operator and

¹ Examiner Notes: The applicant's use of alternative language ('or') within the claim language has given the examiner the option of choosing which content character to disclose. As such, the examiner has opted to disclose the 'text character'. As a result, the examiner believes the limitation for "conducting an ink character match ..." does not warrant a citation.

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the match to the first query word after the boolean operator occur within a portion of the document currently displayed in a viewable area (column 37, lines 9-26, Roche);

sorting the matches in the match list (column 11, lines 4-6, Roche)³;

identifying the match in the match list (column 20, lines 32-37, Roche) that is closest to a match point in the electronic document (column 21, lines 2-5, Roche); and

navigating through the electronic document to the match closest to the match point (column 22, lines 23-35, Roche). While Roche does disclose identifying the match closest to the match point, Roche is silent with respect to highlighting the closest point. On the other hand, Lopresti discloses highlighting the match closest to the match point (column 7, lines 33-40, Lopresti). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Lopresti's teachings into the Roche system. Roche and Lopresti are analogous art because they are from the same field of endeavor of accepting and fulfilling a queries need that supports text data and user-drawn annotations. A skilled artisan would have been motivated to combine the highlighting feature of Lopresti with the Roche system as suggested by Lopresti at column 7, lines 36-41, in order to intensify the matching annotation (i.e. to help the desired match stand out visually for the user). As a result, highlighting the interesting portion of

² Examiner Notes: The proximity operators correspond to the satisfying of the spatial relationship, because the user will designate a specific distance allowed between two terms and anything else is unacceptable.

³ Examiner Notes: "Ranking" corresponds to sorting.

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the document allows the user to identify the text more quickly, saving valuable time.

Regarding Claim 7, the combination of Roche in view of Lopresti, disclose the computer-implemented method further comprising:

retrieving document content from the electronic document (column 13, lines 4-6, Roche)⁴;

accepting at least one document content character from the document content (column 12, lines 30-37, Roche);

determining when additional document content exists in the electronic document (columns 26-27, lines 64-67 and 1-2, respectively, Roche); and

repeating steps a-c for the additional document content (column 21, lines 59-61, Roche).

Regarding Claim 9 and 29, the combination of Roche in view of Lopresti, disclose the computer-implemented method wherein processing a boolean operator in the search query comprises:

accepting the boolean operator from the search query (column 1, lines 29-33, Roche);

accepting a match to a first query word before the boolean operator from the match list (column 2, lines 9-17, Roche)⁵;

⁴ Examiner Notes: The retrieving of the document is performed by the retrieval application (column 11, lines 18-21, Roche).

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accepting a match to a first query word after the boolean operator from the match list (column 2, lines 9-17, Roche)⁶;

determining when the match to the first query word before the boolean operator and the match to the first query word after the boolean operator satisfy a spatial relationship (column 2, lines 24-30, Roche)⁷; and

removing from the match list the match to the first query word before the boolean operator and the match to the first query word after the boolean operator in response to a failure to satisfy the spatial relationship (column 2, lines 40-52, Roche)⁸.

Regarding Claims 13 and 26, the combination of Roche in view of Lopresti, disclose the computer-implemented method wherein the match point comprises the cursor location in the electronic document (column 5, lines 29-31, Lopresti).

Regarding Claims 14 and 27, the combination of Roche in view of Lopresti, disclose the computer-implemented method wherein sorting the matches comprises sorting the matches in the match list by the page number in

⁵ Examiner Notes: The first query word before the boolean is "Alexander" the match is "Alexander Heard".

⁶ Examiner Notes: "Bell" represents the first query word after the boolean and the match is "Packard Bell".

⁷ Examiner Notes: The proximity operators correspond to the satisfying of the spatial relationship, because the user will designate a specific distance allowed between two terms and anything else is unacceptable.

⁸ Examiner Notes: Reducing the number of irrelevant documents correspond to removing.

which the match is located in the electronic document (column 17, lines 31-34, Roche).

Regarding Claim 15, the combination of Roche in view of Lopresti, disclose the computer-implemented method further comprising:

sorting a plurality of matches in the match list by page number in the electronic document (column 17, lines 31-34, Roche);

accepting a first match and a second match from the match list (column 13, lines 60-61, Roche);

determining when at least one character is between the documents content characters corresponding to the first match and the second match in the electronic document (column 2, lines 33-37, Roche)⁹;

merging the first match and the second match in the match list in response to a negative determination of at least one character between the document content characters corresponding to the first match and the second match (column 12, lines 53-57, Lopresti)¹⁰;

retrieving a next match in the match list (column 26, lines 64-66, Roche);

and

repeating steps b-e for the plurality of matches in the match list (columns 26-27, lines 66-67 and 1-2, respectively, Roche).

⁹ Examiner Notes: The search is for "Alexander NEAR Bell", an optional outcome is "Alexander Graham Bell", wherein Graham is an example of characters between the two matches.

¹⁰ Examiner Notes: The "errors" are indications of a negative determination.

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Regarding Claim 17, the combination of Roche in view of Lopresti, disclose the computer-implemented method wherein conducting a text character match comprises:

- comparing the document content character to the search query character to determine if the characters match (column 18, lines 47-51, Roche);

- determining when the search query word contains additional characters in response to a positive determination that the search query character matches the document content character (columns 26-27, lines 64-67 and 1-2, respectively, Roche);

- retrieving another one of the search query characters in response to a positive determination that the search query word contains additional characters (column 13, lines 44-56, Roche); and

- sending a match to the match list in response to a negative determination that the search query word contains additional characters (column 11, lines 50-52, Lopresti).

Regarding Claim 18, the combination of Roche in view of Lopresti, disclose the computer-implemented method further comprising:

- determining when the electronic document comprises a next document content character (columns 26-27, lines 64-67 and 1-2, respectively, Roche) in response to a negative determination that the search query character matches the document content character;

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retrieving the next document content character in response to a positive determination that the electronic document comprises the next document content character (column 13, lines 4-6, Roche); and

comparing the search query character to the next document content character to determine when the characters match (column 18, lines 47-51, Roche).

Regarding Claim 19, the combination of Roche in view of Lopresti, disclose the computer implemented method further comprising:

determining when the search query contains another search query word (column 12, lines 30-33, Roche);

retrieving a search query character of the other search query word in response to a positive determination that the search query contains the other search query word (column 13, lines 44-56, Roche); and

comparing the document content character to the search query character of the other search query word to determine if the characters match (columns 7-8, lines 60-67 and 1-6, respectively, Lopresti).

Regarding Claim 20, the combination of Roche in view of Lopresti, discloses the computer-implemented method wherein conducting an ink character match comprises:

accepting an ink alternate word, wherein the ink alternate word is an estimation of the actual ink word received by the electronic document;

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retrieving an ink alternate character for the ink alternate word;
determining when the ink alternate character matches the search query character;
accepting another ink alternate word in response to a determination that the ink alternate character does not match the search query character; and
repeating stages b-d for the other ink alternate word. (Examiner Notes: Since the claim limitations depend from the alternative language as stated in claim 6; wherein the examiner has opted to disclose the limitations for conducting a text character match, citations will not be provided.)

Regarding Claim 21, the combination of Roche in view of Lopresti, disclose the computer implemented method further comprising:
accepting another ink alternate character for the ink alternate word;
accepting another search query character from the search query word;
determining when the other ink alternate character matches the other search query character;
determining when the other search query character is the last character in the search query word in response to a positive determination that the other ink alternate character matches the other search query character; and
sending a match to the match list in response to a positive determination that the other search query character is the last character in the search query word. (Examiner Notes: Since the claim limitations depend from the alternative

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language as stated in claim 6; wherein the examiner has opted to disclose the limitations for conducting a text character match, citations will not be provided.)

Regarding Claim 22, the combination of Roche in view of Lopresti, disclose the computer-implemented method further comprising:

determining when the search query contains another search query word; retrieving a search query character of the other search query word in response to a positive determination that the search query contains the other search query word; and

determining when the search query character of the other search query word matches the ink alternate character of the ink alternate word. (Examiner Notes: Since the claim limitations depend from the alternative language as stated in claim 6; wherein the examiner has opted to disclose the limitations for conducting a text character match, citations will not be provided.)

Regarding Claim 23, the combination of Roche in view of Lopresti, disclose the computer-implemented method further comprising:

determining when the electronic document comprises additional document content characters (columns 26-27, lines 64-67 and 1-2, respectively, Roche);

retrieving a next document content character in response to a positive, determination that the electronic document comprises additional document content characters (columns 13-14, lines 60-67 and 1-4, respectively, Roche); and

determining when the next document content character is an ink character or a text character (columns 16-17, lines 55-67 and 1-11, respectively, Roche).

Regarding Claim 24, the combination of Roche in view of Lopresti, disclose a computer-readable medium having computer-executable instructions for performing the steps (column 9, lines 40-64, Roche).

Regarding Claim 28, the combination of Roche in view of Lopresti, disclose the computer-implemented medium having computer-readable instructions wherein the search query comprises at least two search query words (column 13, lines 44-56, Roche), further comprising the step of processing a boolean operator in the search query (column 35, lines 59-64, Roche).

8. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roche (US Patent No. 6,859,800) filed April 26, 2000 in view of Lopresti (US Patent No. 5,832,474) filed February 26, 1996, as applied to claims 6-9,12-15, and 25-29 above, and further in view of "Software Patent Institute Database of Software Technologies", Published 1997, will be referred to hereinafter as "SPI".

Regarding Claim 10, the combination of Roche in view of Lopresti, disclose the computer-implemented method wherein the spatial relationship is satisfied when the match to the first query word before the Boolean operator and the match to tie first query word after the boolean operator. However, Roche in

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view of Lopresti, are silent with respect to the spatial relationship occurring within the same paragraph of the electronic document. On the other hand, SPI discloses the spatial relationship occurring within the same paragraph of the electronic document (pg.3, lines 7-26, SPI). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate SPI's teachings into the Roche in view of Lopresti system. The combination of Roche in view of Lopresti, and SPI are analogous art because they are from the same field of endeavor of using search operators in order to search. A skilled artisan would have been motivated to combine the combination of Roche in view of Lopresti with the SPI teaching in order to allow the user to designate the spacing between two terms, which allows the for commanding the system to retrieve documents which contain the terms close to each other. Boolean operators are used for searching electronic documents and determining a query by joining terms. As a result, this allows for more control over the query results and reduction in number of irrelevant documents.

Regarding Claim 11, the combination of Roche in view of Lopresti, and further in view of SPI, disclose the computer-implemented method wherein the spatial relationship is satisfied when the match to the first query word before the boolean operator and the match to the first query word after the boolean operator occur within the same page of the electronic document (pg.3-4, lines 41-48 and 1-8, respectively, SPI).

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Response to Arguments

Applicant's arguments with respect to claims 1-5 and newly amended claims 6 and 25 have been considered but are moot in view of the new ground(s) of rejection.

Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chelcie Daye whose telephone number is 571-272-3891. The examiner can normally be reached on M-F, 7:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chelcie Daye
Patent Examiner
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March 26, 2007

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